MICHAEL JEROME YASZEMSKI, M.D., Ph.D.

May 2003

PERSONAL INFORMATION

Specialty: Orthopedic Surgery
Chemical Engineering

CURRENT POSITION AND ADDRESS:

Associate Professor of Orthopedic Surgery and Biomedical Engineering
Mayo Foundation and Mayo Medical School
Consultant, Department of Orthopedic Surgery
Mayo Clinic, Rochester, MN 55905; Voice:(507) 266-5262; Fax: (507)-266-4234
Director, Tissue Engineering and Polymeric Biomaterials Laboratory
Mayo Medical and Graduate Schools; Voice:(507)-284-2267; Fax: (507)-284-5075

EDUCATION:

Lehigh University, Bethlehem, PA; Major: Chemical Engineering, Bachelor of Science with High Honors
Lehigh University, Bethlehem, PA; Major: Chemical Engineering, Master of Science with High Honors. Thesis: "The Preparation And Characterization Of A Vinyl Acetate-Diallylamine Copolymer Latex To Be Used As An Immunological Reagent"
Georgetown University School of Medicine, Washington, D.C., Doctor of Medicine.
Massachusetts Institute of Technology, Cambridge, MA; Major: Chemical Engineering, Doctor of Philosophy. Thesis: "A Temporary Replacement for Trabecular Bone: The Design, Synthesis, and Evaluation of a Novel Degradable Polymeric Biomaterial."
Wilford Hall Medical Center, San Antonio, TX, Intern, General Surgery.
Wilford Hall Medical Center, San Antonio, TX, Resident, Orthopaedic Surgery.
Orthopaedic Biomechanics Laboratory and Department of Orthopaedic Surgery, Beth Israel Hospital, Harvard Medical School, Boston, MA; Research Fellow, Orthopaedic Biomechanics; Director: Wilson C. Hayes, Ph.D.; Clinical Fellow, Spine Surgery; Director: Augustus A. White, III, M.D., Ph.D.

BOARD CERTIFICATIONS

Certification: National Board of Medical Examiners
Certification: Diplomat of American Board of Orthopaedic Surgery
Re-certification: American Board of Orthopaedic Surgery
Certification (Engineering): Passed Engineer-in-Training Examination
Basic Life Support Certification

Advanced Cardiac Life Support Certification
Certification: Special Licensing Examination (SPEX)

MEDICAL LICENSURE

New Jersey Medical License
Massachusetts Medical License
Maine Medical License
Arkansas Medical License
Texas Medical License
North Carolina Medical License
Minnesota Medical License
Florida Medical License

HONORS / AWARDS

Tau Beta Pi, National Engineering Honor Society
Lehigh University Class of 1906 Scholar/Athlete Award
National Collegiate Athletic Association Postgraduate Scholarship Award
Lehigh University Beta Theta Pi Cup, Outstanding Scholar-Athlete
National Football Foundation and Hall of Fame Scholar/Athlete Award
Lehigh University Football Team:
Starting Offensive Tackle, Unsung Hero Trophy, N.C.A.A. Division II Quarterfinalist Team, Lambert Cup, Top Eastern Division II Team
Graduate Assistant Coach, N.C.A.A. Division I-AA National Championship Team
Member, Delta Upsilon Fraternity; Vice President
Outstanding Young Men of America
Air Force Training Ribbon, June, 1983
Air Force Achievement Medal, July 1, 1985
Air Force Outstanding Unit Award, Jan.-Dec. 1987; Oak Leaf Cluster, Jan.-Dec. 1988
American Medical Association Physician Recognition Award
April 1, 1985 - April 1, 1988
September 1, 1988 - June 30, 1991
July 1, 1991 - June 30, 1994
July 1, 1994 - June 30, 1997
July 1, 1997 - June 30, 2000
Air Force Commendation Medal, March 30, 1989
Air Command and Staff College, Extension Course Institute (Correspondence), Air University, Maxwell AFB, AL, Honor: Outstanding Graduate, Jan.1,1987-Jan. 4, 1989
First Alternate, American Orthopaedic Association John J. Fahey North American Travelling Fellowship, 1990
West's Who's Who in Health and Medicine, elected 1990
National Defense Service Medal, March 1991
Sigma Xi, Scientific Research Honor Society, M.I.T Chapter

Air Force Longevity Ribbon, July 1987; Oak Leaf Cluster, July, 1991
Norman T. Kirk Award, Best Scientific Paper, Society of Military Orthopaedic Surgeons 35th Annual Meeting, December 1992
Eugene J. Nordby Research Award, Best Presentation at the Annual Meeting of the International Intradiscal Therapy Society, Aberdeen, Scotland, May 24, 1994
Massachusetts Institute of Technology, Department of Chemical Engineering, Outstanding Seminar in Chemical Engineering for Spring 1994 term
Marquis' Who's Who in Science and Engineering, 1995
1995 Herschel M. Rich Invention Award for Outstanding Patent, Rice University, April 22, 1995: Poly (Propylene Fumarate-co-Ethlyene Oxide)
Surgeon General's Award, Best Orthopaedic Scientific Presentation, Society of Air Force Clinical Surgeons 42nd Annual Meeting, April 1995
Honorable Mention Poster Award, Fourteenth Annual Conference of the Houston Society for Engineers in Medicine and Biology, Houston, TX, February 16, 1996
Air Force Meritorious Service Medal, June 17, 1996
The Kirk Award for Best Scientific Paper. The 39th Annual Meeting of the Society of Military Orthopaedic Surgeons. Palmer, C.; Murray, P.; Snearly, W.; Yaszemski, M.: The Mechanism of Ulnar-Sided Peri-Lunar Instability of the Wrist. Lake Placid, NY, October 8, 1997.
1998 Austrian, Swiss, German (ASG) Exchange Travelling Fellow of The American Orthopaedic Association (AOA).
First Place. The Roy Davis Scientific Paper Competition. Palmer, C.; Murray, P.; Snearly, W.; Yaszemski, M.: The Mechanism of Ulnar-Sided Perilunar Instability of the Wrist. May 8, 1998.
Marquis' Who's Who in the World, 1999.
Thesis Committee member to recipient: Proprietary information deleted.
Fellow, American Institute of Medical and Biological Engineering.
2000 Hershel M. Rich Invention Award for Outstanding Patent, Rice University, S.J. Peter, M.J. Yaszemski, and A.G. Mikos: "Bone Replacement Compound Comprising Poly(Propylene Fumarate)"
Air Force Meritorious Service Medal, First Oak Leaf Cluster, 2000.
First prize for the session of Case Reports-Pain, Midwest Anesthesia Residents Conference (MARC), Omaha, NE, for the presentation: Ghaleb, A.H., Brower, M.C., Wong, G.Y., Huntoon, M.A., Ross, S.R., and Yaszemski, M.J.: Quadratus Femoris Muscle Injection for Chronic Left Hip/Buttock Pain, March 8-10, 2002.
Air Force Reserve Brigadier General Qualification Board, selected November 2002

MILITARY SERVICE

United States Air Force, Active Duty, June 13, 1983 - June 15, 1996
United States Air Force, Ready Reserve, August 18, 1979 - June 12, 1983
United States Air Force, Ready Reserve, September 15, 1996 - present; rank: Colonel; date of rank: 1 April 1998.

PREVIOUS PROFESSIONAL POSITIONS AND APPOINTMENTS

G.A.F. Corporation, G.A.F. Research Center, Wayne, NJ, October 1978 - August 1979. Title: Research Engineer, Latex Polymers Group. Responsibility: Polymer synthesis in laboratory glassware and subsequent scale-up to 1 gallon pilot plant reactors. Supervisor of pilot plant operations.

Flight Medicine Office, USAF Clinic Kelly, Kelly AFB, TX. Title: Chief, Flight Medicine. September 10, 1984 - June 16, 1985.

Hyperbaric Medicine Diving Team Member, Brooks AFB, TX. July 1985 - May 1989; September 1991- June 15, 1996.

Staff Orthopaedic Surgeon, Department of Orthopaedic Surgery, Beth Israel Hospital, Boston, MA, July 1, 1989 -June 30, 1990.

Air Force Institute of Technology, Wright-Patterson AFB, OH; Location: Orthopaedic Biomechanics Laboratory, Department of Orthopaedic Surgery, Beth Israel Hospital/Harvard Medical School, Boston, MA, and Department of Chemical Engineering, Massachusetts Institute of Technology, Cambridge, MA. Responsibility: Research Fellow, Orthopaedic Biomechanics; Clinical Fellow, Spine Surgery; Doctoral Candidate, Chemical Engineering; July 1, 1989 - June 30, 1991.

Senior Research Fellow and Charter Member, Board of Advisors, Northeastern University Center for Biotechnology Engineering, Boston, MA, March 6, 1990 – 2000.

Instructor in Orthopaedic Surgery, Beth Israel Hospital/Harvard Medical School Boston, MA, July 1, 1990-June 30, 1991

Adjunct Professor of Chemical Engineering, Department of Chemical Engineering, Northeastern University, Boston, MA, September, 1990 – June, 1996

Department of Orthopaedic Surgery, Wilford Hall Medical Center, Lackland AFB, San Antonio, TX. Responsibility: Staff Orthopaedic Surgeon, Director of Orthopaedic Research, Chief of Hyperbaric Medicine. July 1, 1991- June 15, 1996.

Assistant Professor of Surgery, F. Edward Hebert School of Medicine, Uniformed Services University of the Health Sciences, Bethesda, MD, June 23, 1992 - November 5, 1995.

Adjunct Assistant Professor of Chemical Engineering, Rice University, Houston, TX, July 1, 1994 - November 4, 1996.

Clinical Assistant Professor of Orthopaedics, University of Texas Health Science Center at San Antonio, San Antonio, Texas, August 1, 1994 - June 15, 1996

Associate Professor of Surgery, F. Edward Hebert School of Medicine, Uniformed Services University of the Health Sciences, Bethesda, MD, November 6, 1995-present

Adjunct Associate Professor of Chemical Engineering, Rice University, Houston, TX, November 5, 1996-present

Assistant Professor of Orthopedic Surgery, Mayo Medical School, Rochester, MN, October 1, 1996 - June 30, 1997

Associate Professor of Orthopedic Surgery, Mayo Medical School, Rochester, MN, July 1, 1997- December 31, 1997

Associate Professor of Orthopedic Surgery and Biomedical Engineering, Mayo Medical School, Rochester, MN, January 1, 1998-present

Senior Associate Consultant, Department of Orthopedic Surgery, Mayo Clinic, June 16, 1996-June 16, 1999

Consultant, Department of Orthopedic Surgery, Mayo Clinic, June 17, 1999-present

United States Air Force Ready Reserve, Individual Mobilization Augmentee, Wilford Hall Medical Center, Lackland Air Force Base, Texas, 1996-2000
United States Air Force Ready Reserve, Individual Mobilization Augmentee, Office of the Surgeon General, Bolling AFB, D.C., 2001- present
United States Air Force, Surgeon General's Tactical Assistance Team, Office of the Surgeon General, Bolling AFB, D.C., 2001- present

PROFESSIONAL MEMBERSHIPS AND SOCIETIES

American Institute of Chemical Engineers, 1977 - present
Society of Military Orthopaedic Surgeons, 1985 - present
Society of Air Force Clinical Surgeons, 1986 - 1996
American Academy of Orthopaedic Surgeons, Member, 1986 - present; elected Fellow February 21, 1995
Sigma Xi, 1991-present
Society for Biomaterials, 1992- present
Bexar County Medical Society, 1994-1996
Texas Medical Association, 1994-1996
American Society for Testing and Materials, 1994, 2001
American Chemical Society, 1994-present
Materials Research Society, 1994-1995, 2001
Orthopaedic Research Society, 1995-present
North American Spine Society, 1996-2003
Clinical Orthopaedic Society, 1996-2000
Academic Orthopaedic Society, 1994-2000
Minnesota Medical Society, 1996-present
American Orthopaedic Association, 1997-present
Scoliosis Research Society, Candidate Member, 1997-2002; Fellow, 2002-present
Interurban Orthopaedic Society, 1997-present
Association of Air Force Reserve Flight Surgeons, 1998-present

EDUCATIONAL ACTIVITIES

Health Professions Officer Indoctrination Course, Air University, Maxwell AFB, AL, June 5 - July 5, 1979
School of Aerospace Medicine Introductory Course: Survival Training & Aerospace Physiology, School of Aerospace Medicine, Brooks AFB, TX, June 15 - July 15, 1980
Aerospace Medicine Primary Course, School of Aerospace Medicine, Brooks AFB, TX, July 15 - August 29, 1984
Armed Forces Combat Casualty Care Course and Advanced Trauma Life Support Certification, Academy of Health Sciences, Brooke Army Medical Center, Fort Sam Houston, TX, September 21-29, 1984
Hyperbaric Chamber Training Course, Hyperbaric Medicine Division, School of Aerospace Medicine, Brooks AFB, TX, March 11-15, 1985

Orthopaedic Pathology Course, Armed Forces Institute of Pathology, Walter Reed Army Medical Center, Washington, D.C., September 21 - October 31, 1986
Squadron Officer School, Extension Course Institute (Correspondence), Air University, Maxwell AFB, AL, January 1, 1985 - November 21, 1986
Instron 1330 Series Materials Testing Machine Operator Course, Instron Corporation, Canton, MA, June 4-8, 1990
AO/ASIF Fellowship, Spine Surgery and Orthopaedic Trauma, Prof. F. Magerl, Kantonsspital, St. Gallen, Switzerland, April 29 - May 31, 1991
Instron 1120 Series Materials Testing Machine Operator Course, Instron Corporation, Canton, MA, July 29 - August 1, 1991
Air War College, Extension Course Institute (Correspondence), Air University, Maxwell AFB, AL, October 15, 1995- April 23, 1997

INSTITUTIONAL/DEPARTMENTAL ADMINISTRATIVE RESPONSIBILITIES, COMMITTEE MEMBERSHIPS, AND OTHER ACTIVITIES

Institutional Service:

Wilford Hall Medical Center, Division of Surgery, Lackland AFB, TX: Director, Hyperbaric Medicine, 1993-1996
Wilford Hall Medical Center, Department of Orthopedic Surgery, Lackland AFB, TX: Director, Orthopedic Research, 1991-1996.
Research Committee, Department of Orthopedic Surgery, Mayo Clinic, 1996-present
Alumni Advisor to Undergraduates, Massachusetts Institute of Technology, 1997-present
Information Security Subcommittee of Mayo Medical Center Rochester Information Technology Committee, 1999-present
Information Security Subcommittee of Mayo Foundation Information Infrastructure Policy Committee, 1999- present
Education Committee, Department of Orthopedic Surgery, Mayo Clinic, 1999- present
Director, Basic Science Curriculum and Master of Science Program in Orthopedic Surgery, Orthopedic Surgery Residency Program, Mayo Clinic, 1999-2001
Alternate Member, FY00 Air Force Reserve Colonel Promotion Selection Board, 1999
Institutional Animal Care and Use Committee, Mayo Foundation, Jan. 1999- Dec. 2001; Acting Chair, January, 2000; November, 2000; October, 2001.
Course Director, Mayo Graduate School Core Course BME6750, Concepts in Biomedical Engineering, 1999-
Consultant for Orthopedic Surgery to the AFRC Surgeon General, United States Air Force, December 28, 1999 - March 31, 2002.
Institutional Review Board, Mayo Foundation, 2000-2003
Member, Surgical Facilities Subcommittee, Mayo Foundation, 2002-
Course Director, Mayo Graduate School Course BME5000, Introduction to Biomedical Engineering, 2002-

Professional Society Service:

Consultant to the Orthopedic and Rehabilitation Devices Panel, Center for Devices and Radiological Health, Food and Drug Administration, Rockville, MD, April 1997 - July 1997.

Member, Orthopedic and Rehabilitation Devices Panel, Center for Devices and Radiological Health, Food and Drug Administration, July 1997-June 2001.

Member of the OREF Grant Peer Review Committee, Orthopaedic Research and Education Foundation, Rosemont, IL, April 3, 1997 - 2001.

NIH Surgery and Bioengineering Study Section Member (Ad Hoc), Bethesda, MD, October 19-20, 1998

NIH Small Business Innovative Research (SBIR) and Small Business Technology Transfer Research (STTR) Study Section Member (Ad Hoc), Muscular, Skeletal & Dental Initial Review Group (MSD IRG, SSS5-5), Division of Physiological Systems, Bethesda, MD, April 6, 1999, July 29-30, 1999, December 5-6, 1999.

Member, *ex officio*, Austria-Switzerland-Germany Exchange Fellowship Subcommittee, International Traveling Fellowships Committee, American Orthopaedic Association, 1999.

Adjunct Reviewer, Program Committee, Orthopaedic Research Society, 1999, 2002.

Acting Chair, Orthopedic and Rehabilitation Devices Panel, Center for Devices and Radiological Health, Food and Drug Administration, November 4, 1999

Consultant, Biologic Implants Committee, American Academy of Orthopaedic Surgeons, 1999-2000.

Ad Hoc Reviewer, Whitaker Foundation Bioengineering Grant Program, 1999, 2002

Member, Research Coordinating Committee, Scoliosis Research Society, 1999-present.

Member (Ad Hoc), NIH SBIR Tissue Engineering Study Section (SSS-M-03), November 16, 1999

Member, NIH Bioengineering Research Partnership Special Study Section (SSS-M-02), March 22-23, 2000; November 16-17, 2000; July 10, 2001.

Member, NIH Tissue Engineering Special Emphasis Panel Study Section, (SSM-M-03), March 24, 2000; July 9, 2001; July 10, 2002.

Member, NIH Bioengineering Research Grant Special Study Section (SSS-M-01), March 22, 2000; November 16, 2000; July 11, 2001; July 8, 2002.

Chair, Orthopedic and Rehabilitation Devices Panel, Center for Devices and Radiological Health, Food and Drug Administration, October, 2000- August, 2005

Member, Board of Directors, Minnesota Orthopaedic Society, 2000-

Member, Austria-Switzerland-Germany Exchange Fellowship Subcommittee, International Traveling Fellowships Committee, American Orthopaedic Association, 2000-2003.

Member, Shands Lectureship Committee, American Orthopaedic Association, 2000-2002.

Member, Biologic Implants Committee, American Academy of Orthopaedic Surgeons, 2001-2004.

Air Force Reserve Representative, Society of Military Orthopaedic Surgeons, 2001-

Member, Board of Directors, Society of Military Orthopaedic Surgeons, 2001-

NIH P41 Special Study Section site visit member, National Core Center Program, April 8-9, 2001 (site visit), June 16-17, 2002, (reverse site visit).

Member, American Society for Testing & Materials, Committee F04: Medical Devices, February, 2001- present

Member, American Academy of Orthopaedic Surgeons Committee on Evaluation, Subcommittee on Anatomy-Imaging Evaluation, Feb., 2002- Feb. 2005
Chair, NIH Tissue Engineering Study Section, March 22, 2002
Chair, Research Coordinating Committee, Scoliosis Research Society, 2002-
Member, Orthopaedic Research Society/American Orthopaedic Association Shands Research Award Selection Committee, 2002-
Chair, Austria-Switzerland-Germany Exchange Fellowship Subcommittee, International Traveling Fellowships Committee, American Orthopaedic Association, 2002-2005
Member, Research Task Force, Scoliosis Research Society, 2002-
Member, American Academy of Orthopaedic Surgeons Committee on Evaluation, Subcommittee on Adult Spine, 2003-
Member (representing the Scoliosis Research Society), Research Committee, United States Bone and Joint Decade, 2003-
Chair, Research Grants Review Committee, Scoliosis Research Society, 2003-

Community Service

Proprietary information deleted.

Editorial

Journals

Co-editor, Journal of Biomaterials in Practice, 1996 -
Editorial Board, Regenerative Medicine, 1999-
Editorial Board, Tissue Engineering, 2001-
International Editorial Board, Biomaterials, 2002-

Books

1. Encyclopedic Handbook of Biomaterials and Bioengineering, Wise, D.L., Trantolo, D.J., Altobelli, D.E., Yaszemski, M.J., Gresser, J.D., and Schwartz, E.R., *editors*, Marcel Dekker, NY, 1995.
2. Polymers in Medicine and Pharmacy, Symposium Proceedings Vol. 394; Leong, K., Yaszemski, M., Tamada, J., Radomsky, M., and Mikos, A., *editors*, Materials Research Society, Pittsburgh, 1995.
3. Biomaterials Applications, Wise, D.L., Gresser, J.D. , Trantolo, D.J., Altobelli, D.E., and Yaszemski, M.J., *editor*s, Humana Press, 1996.
4. Handbook of Pharmaceutical Controlled Release, Wise, D.L., Klibanov, A., Langer, R., Mikos, A., Brannon-Peppas, L., Peppas, N. A., Trantolo, D. J., Wnek, G.E., and Yaszemski, M.J., *editors*, Marcel Dekker, Inc., New York, NY., ISBN 0-8247-0369-3, 2000.
5. Biomaterials Engineering and Devices: Human Applications, Wise, D.L., Trantolo, D.L., Lewandrowski, K.U., Gresser, J.D., Cattaneo, M.V., and Yaszemski, M.J., *editors*, Humana Press, Totowa, N.J., ISBN 0-89603-858-0, 2000.
6. EMedicine Orthopaedic Surgery Reference (Serial Online), Managing Editor, 2001-2003.

7. Biomaterials and Bioengineering Handbook, Wise, D.L., Trantolo, D.L., Lewandrowski, K.U., Gresser, J.D., Cattaneo, M.V., and Yaszemski, M.J., *editors*, Marcel Dekker, New York, N.Y., ISBN 0-82470-318-9, 2000.
8. Tissue Engineering and Biodegradable Equivalents: Scientific and Clinical Applications, Lewandrowski, K.U., Wise, D.L., Trantolo, D.L., Gresser, J.D., Yaszemski, M.J., and Altobelli, D.E., *editors*, Marcel Dekker, New York, NY, ISBN 0-8247-0755-9, 2002.
9. Biomaterials Handbook- Advanced Applications of Basic Sciences and Bioengineering, Wise, D.W., Hasirci, V., Lewandrowski, K-U., Yaszemski, M.J., Altobelli, D.E., and Trantolo, D.J., *editors*, Marcel Dekker, New York, N.Y., *in press*.
10. Advances in Spinal Fusion: Molecular Science, Biomechanics, and Clinical Management. Lewandrowski, K.U., Wise, D.L., Trantolo, D.J., Yaszemski, M.J., and White III, A.A., *editors*, Marcel Dekker, New York, N.Y., *in press*.
11. Yearbook of Orthopaedic Surgery, Spine Surgery Section editor, Mosby, 2001-present
12. Biomaterials and Bioengineering Handbook: Second Edition, Wise, D.W., Hasirci, V., Lewandrowski, K-U., Yaszemski, M.J., *editors*, Marcel Dekker, New York, N.Y., *in press*.
13. Handbook of Tissue Engineering and Novel Delivery Systems, Wise, D.W., Hasirci, V., Lewandrowski, K-U., Yaszemski, M.J., *editors*, Marcel Dekker, New York, N.Y., *in press*.

COURSES ORGANIZED OR MODERATED

Southern Orthopaedic Association Residents and Fellows Conference, San Antonio, TX, Moderator, Basic Science/ Pathology Section, November 2, 1987

Society of Military Orthopaedic Surgeons, 35th Annual Meeting, Colorado Springs, CO, Moderator, Spine Surgery Section, December 2, 1992

Faculty, First Annual Texas Total Joint Roundup, Hip and Knee Arthroplasty Course, San Antonio, TX, April 8-9, 1994

Materials Research Society, Symposium organizer and Session Chair for 1995 Annual Meeting, San Francisco, CA: Symposium Z, "Polymers in Medicine and Pharmacy", April 17, 1995

Society of Air Force Clinical Surgeons 1995 Annual Meeting, Moderator, Adult Reconstruction Session, Dayton, OH, April 25, 1995

Society of Air Force Clinical Surgeons 1995 Annual Meeting, Moderator, Basic Science Session, Dayton, OH, April 26, 1995

American Institute of Chemical Engineers, 1995 Bioengineering Conference, Cellular and Tissue Engineering Session Co-Chair, Beaver Creek, CO, June 28 - July 2, 1995

Society of Military Orthopaedic Surgeons, 37th Annual Meeting, Vail, CO, Moderator, Research and Basic Science Session, December 6, 1995

Society of Air Force Clinical Surgeons 1996 Annual Meeting, Moderator, Basic Science Session, Dayton, OH, April 4, 1996

Moderator, "Clinical Evaluation. Management of Low Back Pain and Sciatica in the Era of Managed Care". Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA, October 17-19, 1996.

Session Chair, "Orthopedic Biomaterials". American Institute of Chemical Engineers Topical Conference on "Biomaterials, Carriers for Drug Delivery and Scaffolds for Tissue Engineering", Los Angeles, CA, November 19, 1997.
Session Chair, "Spine Treatment". Orthopaedic Research Society 1999 Annual Meeting, Anaheim, CA, February 4, 1999.
Moderator, Spine Session, Mayo Clinic Orthopedic Alumni Meeting, Rochester, MN, October 16, 1999.
Course Director, Mayo Graduate School Core Course BME6750, Concepts in Biomedical Engineering, 1999-
Course Organizer, "Orthopaedic Tissue Engineering", Washington, D.C., January 23-25, 2000.
Faculty, AO/ASIF Comprehensive Spine Course, Breckenridge, CO, March 10-12, 2000
Session Chair, "Spine", Orthopaedic Research Society/American Academy of Orthopaedic Surgeons Combined Session, 2000 Annual Meeting, Orlando, FL, March 16, 2000.
Session Chair, "New Test Methods: in vitro, in vivo, and ex-vivo." World Biomaterials Congress, Kameula, HI, May 19, 2000.
Moderator, Graduating Residents Presentations, Mark B. Coventry Graduation Symposium, Rochester MN, June 3, 2000; June 2, 2001.
Moderator, Spine Session, American Academy of Orthopaedic Surgeons 2001 Annual Meeting, San Francisco, CA, February 28, 2001.
Moderator, Session II: Spine Tumors, Sacral Tumors, Desmoid Tumors, and Founder's Lecture, Musculoskeletal Tumor Society 2001 Annual Meeting, Baltimore, MD, May 11, 2001.
Faculty, AO/ASIF Comprehensive Spine Course, Marco Island FL, Sept. 7-9, 2001.
Moderator, Musculoskeletal Tumor Session, Society of Military Orthopaedic Surgeons 43rd Annual Meeting, December 14, 2001.
Moderator, Spine Session (#47), Orthopaedic Research Society Annual Meeting, Dallas, TX, February 13, 2002.
Moderator, Spine Session, American Orthopaedic Association/ Canadian Orthopaedic Association First Joint Annual Meeting, Victoria, British Columbia, Canada, June 1, 2002.

PRESENTATIONS AT LOCAL MEETINGS

1. Yaszemski, M.J.: Thoracolumbar Fractures. Mayo Clinic Fracture Conference, July 16, 1997.
2. Yaszemski, M.J.: Analysis and Treatment of Sagittal and Coronal Plane Spinal Deformity. 1st Mayo Regional Practice Symposium, Rochester, MN, August 2, 1997.
3. Yaszemski, M.J.: New Concepts and Update in Spinal Deformity. Mayo Foundation Clinical Reviews, Rochester, MN, October 30, 1997 and November 21, 1997.
4. Yaszemski, M.J.: Spondylolysis in the Athlete. Mayo Clinic Symposium on Sports Medicine, Rochester, MN, November 7, 1997.
5. Yaszemski, M.J.: Back Pain in Children. Mayo Clinic Fracture Conference, December 1997.

6. Yaszemski, M.J.: Metastatic Disease of the Spine. Mayo Clinic Fracture Conference, February 11, 1998.
7. Yaszemski, M.J.: Metastatic Spine Tumors: Assessment and Management of Spinal Instability. Mayo Clinic Fracture Conference, January 6, 1999.
8. Yaszemski, M.J.: Bone Regeneration via Synthetic Degradable Polymer Matrices that Provide Controlled Delivery of Cells and Bioactive Molecules. Department of Anesthesiology Grand Rounds, Mayo Clinic, Rochester, MN, April 14, 1999.
9. Yaszemski, M.J.: Bone Tissue Engineering. Mayo Foundation Research Forum, Rochester, MN, October 2, 1999.
10. Yaszemski, M.J.: Tissue Engineering. Mayo Clinic Orthopedic Alumni Meeting, Rochester, MN, October 15, 1999.
11. Yaszemski, M.J.: Evaluation and Management of Lumbar Flatback. Mayo Clinic Orthopedic Alumni Meeting, Rochester, MN, October 16, 1999.
12. Yaszemski, M.J., He, S-L., Crow, F.W., and Naylor, S.: Characterization of Biodegradable Bone Regeneration Scaffolds Based On Poly(propylene fumarate) Using Matrix Assisted Laser Desorption Ionization Time-of-Flight Mass Spectrometry To Determine Molecular Weight Distributions. Mayo Foundation Research Forum, Rochester, MN, December, 2000.
13. Yaszemski, M.J.: Upper Cervical Spine Injuries. Mayo Residency Trauma Lecture Series, Rochester, MN, June 9, 2001.
14. Yaszemski, M.J.: Evaluation and Management of Spinal Metastatic Disease, Mayo Spine Surgery Core curriculum Lecture Series, Rochester, MN, January 14, 2003
15. Yaszemski, M.J.: The FDA Orthopaedic Device Approval Process, Mayo Orthopedic Department Grand Rounds, Rochester, MN January 15, 2003.

PRESENTATIONS AT REGIONAL MEETINGS

1. Thomson, R.C., Yaszemski, M.J., Powers, J.M., and Mikos, A.G.: Biodegradable Poly(lactic-co-glycolic acid) Scaffolds to Engineer Bone. 12th Annual Conference of the Houston Society for Engineers in Medicine and Biology, Houston, TX, February 10, 1994.
2. Ishaug, S.L., Yaszemski, M.J., Bizios, R., and Mikos, A.G.: Osteoblast culture on Biodegradable Polymers as an In Vitro Model of Bone Regeneration. 12th Annual Conference of the Houston Society for Engineers in Medicine and Biology, Houston, TX, February 11, 1994.
3. Payne, R.G., Mikos, A.G., Larsen, K.M., and Yaszemski, M.J.: Synthesis and Characterization of Poly (propylene fumarate), a Linear Unsaturated Polyester for Orthopaedic Applications. 12th Annual Conference of the Houston Society for Engineers in Medicine and Biology, Houston, TX, February 10, 1994.
4. Mabrey, J.D., Williams, R.P., and Yaszemski, M.J.: Custom Acetabular Prostheses for Complex Defects. Annual Meeting of the Texas Orthopaedic Association, Austin, TX, May 14, 1994.
5. Yaszemski, M.J., Payne, R.G., Aufdemorte, T.B., Hayes, W.C., Langer, R.S., and Mikos, A.G.: A Temporary Replacement for Trabecular Bone: The Design and Testing of a Novel Degradable Composite Biomaterial. Thirteenth Annual Conference of the

Houston Society for Engineers in Medicine and Biology, Houston, TX, February 16, 1995.

6. Thomson, R.C., Yaszemski, M.J., Powers, J.M., Harrigan, T.P., and Mikos, A.G.: Reinforcement of Poly (α - Hydroxy Ester) Foams for Orthopaedic Application Using Hydroxyapatite Short Fibers. Thirteenth Annual Conference of the Houston Society for Engineers in Medicine and Biology, Houston, TX, February 16, 1995.
7. Ishaug, S.L., Yaszemski, M.J., Bizios, R., Aufdemorte, T.B., and Mikos, A.G.: Migratory Characteristics of Osteoblast and Bone Cultures on Synthetic Biodegradable Polymers. Thirteenth Annual Conference of the Houston Society for Engineers in Medicine and Biology, Houston, TX, February 16, 1995.
8. Peter, S.J., Engel, P.S., Alemany, L.B., Miller, M.J., Yaszemski, M.J., and Mikos, A.G.: Synthesis and characterization of an osteoinductive, injectable, biodegradable bone cement. Fourteenth Annual Conference of the Houston Society for Engineers in Medicine and Biology, Houston, TX, February 8, 1996.
9. Suggs, L.J., Yaszemski, M.J., Wu, K.K., and Mikos, A.G.: The Synthesis and Characterization of a Novel Block Copolymer Consisting of Poly (Propylene Fumarate) and Poly (Ethylene Glycol). Fourteenth Annual Conference of the Houston Society for Engineers in Medicine and Biology, Houston, TX, February 8, 1996.
10. Ishaug, S.L., Crane, G.M., Miller, M.J., Yaszemski, M.J., and Mikos, A.G.: Bone Formation using Stromal Osteoblasts Cultured in Biodegradable Polymer Foams. Fourteenth Annual Conference of the Houston Society for Engineers in Medicine and Biology, Houston, TX, February 10, 1996.
11. Ruder, C., Dixon, P., Mikos, A.G., and Yaszemski, M.J.: The Growth and Phenotypic Expression of Human Osteoblasts on Synthetic Biodegradable Polymer Scaffolds. Southern Biomedical Engineering Conference, Dayton, OH, March 29, 1996.
12. Yaszemski, M.J.: Clinical Biomechanics of Low Back Pain (LBP) and Practical Ergonomics. Lecture given at the course "Management of Low Back Pain and Sciatica in the Era of Managed Care". Harvard Division of Continuing Medical Education, Boston, MA, October 17-19, 1996.
13. Yaszemski, M.J.: Disc Herniation, Degeneration and Intrinsic Disc Disease. Lecture given at the course "Management of Low Back Pain and Sciatica in the Era of Managed Care". Harvard Division of Continuing Medical Education, Boston, MA, October 17-19, 1996.
14. Yaszemski, M.J.: The Western Perspective of Alternative Medical Therapies. Lecture given at the course "Management of Low Back Pain and Sciatica in the Era of Managed Care". Harvard Division of Continuing Medical Education, Boston, MA, October 17-19, 1996.
15. Kim, D.J., Peter, S.J., Yasko, A.W., Yaszemski, M.J., Mikos, A.G.: Osteoblastic Cellular Behavior on a Poly(Propylene Fumarate) Based Orthopaedic Biomaterial. Annual Meeting of the Houston Society for Engineering in Medicine and Biology, Houston, TX, February 13, 1997.
16. Palmer, C., Murray, P., Snearly, W., Yaszemski, M.: The Mechanism of Ulnar-Sided Perilunar Instability of the Wrist. The 14th Annual Meeting of the Southern Orthopaedic Association, Pebble Beach, CA, July 24, 1997.

17. Palmer, C., Murray, P., Snearly, W., Yaszemski, M.: The Mechanism of Ulnar-Sided Perilunar Instability of the Wrist. The Roy Davies Scientific Paper Competition, San Antonio, TX, May 8, 1998.
18. Palmer, C., Murray, P., Snearly, W., Yaszemski, M.: The Mechanism of Ulnar-Sided Perilunar Instability of the Wrist. Senior Residents Day, Department of Orthopaedic Surgery, Wilford Hall Medical Center, Lackland AFB, San Antonio, TX, June 11, 1998.
19. Yaszemski, M.J.: Bone Tissue Engineering. 92nd Annual Meeting of the Interurban Orthopaedic Society, Johns Hopkins University, Baltimore, MD, October 3, 1998.
20. Stans, A.A., Moir, C., Yaszemski, M.J., Blackman, R.G.: Safety and Screw Failure of Vertebral Body Screws Inserted Endoscopically Versus Open Technique in a Porcine Model. 18th Annual Meeting of the Mid-America Orthopaedic Association, Scottsdale, AZ, April 28, 2000.
21. Stans, A.A., Moir, C., Yaszemski, M.J., Blackman, R.G.: Safety and Screw Failure of Vertebral Body Screws Inserted Endoscopically Versus Open Technique in a Porcine Model. Minnesota Orthopaedic Society, 2000 Annual Meeting, May 19, 2000.
22. Christensen, D.M., Lynch, J.J., Yaszemski, M.J., and Currier, B.L. : C1 Anatomy and Dimensions Relative to Lateral Mass Screw Placement. Minnesota Orthopaedic Society, 2000 Annual Meeting, May 18, 2001.

PRESENTATIONS AT NATIONAL MEETINGS

1. Yaszemski, M.J., and Eady, J.L.: The Use of the CT Scan in the Evaluation of Non-Popliteal Synovial Cysts about the Knee. Society of Air Force Clinical Surgeons 33rd Annual Symposium, Dayton, OH, April 30, 1986.
2. Shepler, T.R., and Yaszemski, M.J.: Flexor Carpi Radialis Ganglion Cysts: Diagnosis and Treatment. Society of Military Orthopaedic Surgeons 29th Annual Meeting, Colorado Springs, CO, November 18, 1986.
3. Yaszemski, M.J., and Shepler, T.R.: Sudden Death from Cord Compression Associated with Atlanto-Axial Instability in Rheumatoid Arthritis: A Case Report. Society of Military Orthopaedic Surgeons 29th Annual Meeting, Colorado Springs, CO, November 19, 1986.
4. Yaszemski, M.J.: The Design of a Sheathed Flexible Shaft Drill for Screw Fixation of Acetabular Cups. Society of Military Orthopaedic Surgeons 33rd Annual Meeting, Williamsburg, VA, November 12, 1990.
5. Yaszemski, M.J., and White III, A.A.: The Discectomy Membrane: Its Anatomic Description and Its Surgical Importance. Society of Military Orthopaedic Surgeons 35th Annual Meeting, Colorado Springs, CO, November 29-December 4, 1992.
6. Olszewski, A., Yaszemski, M.J., and White III, A.A.: The Anatomy of the Human Ligamentum Flavum: A New Look at its Insertions Onto Adjacent Laminae in the Lumbar Spine." Society of Military Orthopaedic Surgeons 35th Annual Meeting, Colorado Springs, CO, November 29-December 4, 1992.
7. Ethier, D.B., Cain, J.E., Lauerman, W.C., Glover, M., and Yaszemski, M.J.: The Influence of Annulotomy Type on Disc Competence. Society of Military Orthopaedic Surgeons 35th Annual Meeting, Colorado Springs, CO, November 29-December 4, 1992.

Voted by Society Members to receive Kirk Award as best scientific presentation at meeting.

8. Olszewski, A., Yaszemski, M.J., and White III, A.A.: The Anatomy of the Human Ligamentum Flavum: A New Look at its Insertions Onto Adjacent Laminae in the Lumbar Spine." American Academy of Orthopaedic Surgeons 60th Annual Meeting, San Francisco, CA, poster presentation, February 17-23, 1993.
9. Olszewski, A., Yaszemski, M.J., and White III, A.A.: The Anatomy of the Human Ligamentum Flavum: A New Look at its Insertions Onto Adjacent Laminae in the Lumbar Spine." The American Orthopaedic Association 26th Annual Resident's Conference, Seattle, WA, March 20, 1993
10. Gomez, B.A., and Yaszemski, M.J.: The Effect of Ketorolac on the Strength of Wound Healing in a Rat Model. The American Orthopaedic Association 26th Annual Resident's Conference, Seattle, WA, March 20, 1993.
11. Yaszemski, M.J.: A Degradable Polymeric Biomaterial for Orthopaedic Applications. Society of Air Force Clinical Surgeons 40th Annual Symposium, Biloxi, MS, April 20, 1993.
12. Ethier, D.B., Cain, J.E., Lauerman, W.C., Glover, M., and Yaszemski, M.J.: The Influence of Annulotomy Type on Disc Competence. North American Spine Society Annual Meeting, San Diego, CA, October 15, 1993.
13. Yaszemski, M.J., Mikos, A.G., Langer, R.S., and Hayes, W.C.: The Synthesis and Characterization of Poly (propylene-fumarate) Via a Two Step Reaction Between Diethyl Fumarate and Propylene Glycol." Annual Meeting of the American Institute of Chemical Engineers, St. Louis, MO, November 10, 1993.
14. Thomson, R.C., Yaszemski, M.J., Powers, J.M., and Mikos, A.G.: A Novel Biodegradable Poly (lactic-co-glycolic acid) Foam for Bone Regeneration. Materials Research Society Fall 1993 Meeting, Boston, MA, November 29, 1993.
15. Ishaug, S.L., Yaszemski, M.J., Bizios, R., and Mikos, A.G.: Osteoblast Adhesion on Biodegradable Polymer Substrates. Materials Research Society Fall 1993 Meeting, Boston, MA, November 30, 1993.
16. Yaszemski, M.J., Mikos, A.G., Payne, R., and Hayes, W.C.: The Effect of Polymer Molecular Weight on the Mechanical Properties of a Degradable Composite Biomaterial Based on Poly (propylene-fumarate) for Orthopaedic Applications. Materials Research Society Fall 1993 Meeting, Boston, MA, December 1, 1993.
17. Sutherland, J., Yaszemski, M.J., and White III, A.A.: A Radiographic and Anatomic Correlation of the C1-C2 relationships in a Ligamentously Intact Cadaver Spine Model. Research Project Progress Report, Annual Meeting of the Cervical Spine Research Society, New York, NY, December 4, 1993.
18. Ethier, D.B., Cain, J.E., Lauerman, W.C., Glover, M., and Yaszemski, M.J.: The Influence of Annulotomy Type on Disc Competence. American Academy of Orthopaedic Surgeons 61st Annual Meeting, New Orleans, LA, February 27, 1994.
19. Yaszemski, M.J., Payne, R.G., Hayes, W.C., Langer, R.S., and Mikos, A.G.: Synthesis and Purification Reaction Schemes for Poly (propylene fumarate), a Novel Degradable Material for Orthopaedic Applications. 20th Annual Meeting of the Society for Biomaterials, Boston, MA, April 8, 1994 (poster).
20. Olszewski, A., Yaszemski, M.J., and White III, A.A.: The Anatomy of the Human Ligamentum Flavum: A New Look at its Insertions Onto Adjacent Laminae in the

Lumbar Spine." Society of Air Force Clinical Surgeons 41st Annual Meeting, San Antonio, TX, April 27, 1994.

21. Yaszemski, M.J.: Bone Repair and Reconstruction. Society of Air Force Clinical Surgeons 41st Annual Meeting, San Antonio, TX, April 26, 1994.
22. Yaszemski, M.J. and Parsons III, T.W.: Bertolotti Vertebra: A Cause of Neural Compression Resulting in L5 Radiculopathy. Society of Air Force Clinical Surgeons 41st Annual Meeting, San Antonio, TX, April 26, 1994.
23. Kaylor, K.L., Carmack, D.B., and Yaszemski, M.J.: Reducibility of External Fixators. Annual Meeting of the Orthopaedic Trauma Association, Los Angeles, CA, September 22-24, 1994 (poster).
24. Carmack, D.B., Kaylor, K.L., and Yaszemski, M.J.: Biomechanics of Clinically Applied External Fixators. Annual Meeting of the Orthopaedic Trauma Association, Los Angeles, CA, September 22-24, 1994 (poster).
25. Ethier, D.B., Cain, J.E., Lauerman, W.C., Glover, M., and Yaszemski, M.J.: The Influence of Annulotomy Type on Disc Competence. 1994 Annual Meeting of the Scoliosis Research Society, Portland, OR, September, 1994.
26. Payne, R.G., Yaszemski, M.J., Aufdemorte, T.B., Hayes, W.C., Langer, R.S., and Mikos, A.G.: The Uncatalyzed Synthesis of Poly (propylene fumarate), Its Strength and Bone Ingrowth Characteristics as a Material for Orthopaedic Use. Annual Meeting of the Biomedical Engineering Society, Tempe, AZ, October 16, 1994.
27. Thomson, R.C., Yaszemski, M.J., Powers, J.M., and Mikos, A.G.: Fabrication of Poly (lactic-co-glycolic acid)/Glass Ceramic Fiber Composite Foams for Orthopaedic Application. Annual Meeting of the Biomedical Engineering Society, Tempe, AZ, October 16, 1994.
28. Ingari, J.V., Smith, D.K., and Yaszemski, M.J.: The Anatomic Significance of Magnetic Resonance Imaging Findings in Proximal Femur Fracture. 36th Annual Meeting of the Society of Military Orthopaedic Surgeons, Hilton Head, SC, November 15, 1994.
29. Bolyard, K. J., Yaszemski, M.J., Poser, J., Scarborough, N., Manrique, A., Aufdemorte, T.B., and Fox, W.C.: Bone Formation in Response to Human Demineralized Bone Matrix and Grafton in a Baboon Healing Defect. 36th Annual Meeting of the Society of Military Orthopaedic Surgeons, Hilton Head, SC, November 15, 1994.
30. Ishaug, S.L., Hoffman, S.A., Yaszemski, M.J., Bizios, R., and Mikos, A.G.: Osteoblast Culture on Poly (α-hydroxy esters) as an in vitro Model of Bone Engineering." Annual Meeting of the American Institute of Chemical Engineers, San Francisco, CA, November 16, 1994.
31. Yaszemski, M.J., Payne, R.G., Hayes, W.C., Langer, R.S., Aufdemorte, T.B., and Mikos, A.G.: A Temporary Replacement for Trabecular Bone: The Design, Synthesis, and Testing of a Novel Degradable Material for Orthopaedic Applications. Annual Meeting of the American Institute of Chemical Engineers, San Francisco, CA, November 13-18, 1994 (poster).
32. Kaylor, K.L., Yaszemski, M.J., and Carmack, D.B.: Reducibility of External Fixators. 36th Annual Meeting of the Society of Military Orthopaedic Surgeons, Hilton Head, SC, November 15, 1994.
33. Jordan, T., France, J.C., Kaylor, K.L., and Yaszemski, M.J.: Job Related Outcome of Lumbar Discectomy in Active Duty Military Members." 36th Annual Meeting of the Society of Military Orthopaedic Surgeons, Hilton Head, SC, November 16, 1994.

34. Sutherland, J., Yaszemski, M.J., and White III, A.A.: A Radiographic and Anatomic Correlation of the C1-C2 relationships in a ligamentously Intact Cadaver Spine Model. Annual Meeting of the Cervical Spine Research Society, Baltimore, MD, November 30, 1994.
35. Jordan, T.F., France, J.C., Kaylor, K.L., Watson, B.P., and Yaszemski, M.J.: Job Related Outcome of Lumbar Discectomy in Active Duty Military Members. 62nd Annual Meeting of the American Academy of Orthopaedic Surgeons, Orlando, FL, February 18, 1995.
36. Mikos, A.G., Ishaug, S.L., Thomson, R.C., Payne, R.G., Aufdemorte, T.B., and Yaszemski, M.J.: Engineering Trabecular Bone. American Association for the Advancement of Science Annual Meeting and Science Innovation Exposition, Atlanta, GA, February 21, 1995.
37. Yaszemski, M.J., Payne, R.G., Aufdemorte, T.B., Hayes, W.C., Langer, R.S., and Mikos, A.G.: The Mechanical and Degradation Characteristics of a Composite Material for Orthopaedic Applications. 21st Annual Meeting of the Society for Biomaterials, San Francisco, CA, March 21, 1995.
38. Yaszemski, M.J., Payne, R.G., Aufdemorte, T.B., Hayes, W.C., Langer, R.S., and Mikos, A.G.: The in vitro Mechanical Strength and in vivo Bone Ingrowth of a Degrading Polymeric Composite Biomaterial. Materials Research Society, Spring 1995 Meeting, San Francisco, CA, April 18, 1995.
39. Thomson, R.C., Yaszemski, M.J., Powers, J.M., Harrigan, T.P., and Mikos, A.G.: Poly (α-Hydroxy Ester)/Short Fiber Hydroxyapatite Composite Foams for Orthopaedic Application. Materials Research Society, Spring 1995 Meeting, San Francisco, CA, April 18, 1995.
40. Suggs, L.J., Payne, R.G., Kao, E.Y., Alemany, L.B., Yaszemski, M.J., Wu, K.K., and Mikos, A.G.: The Synthesis and Characterization of a Novel Block Copolymer Consisting of Poly (Propylene Fumarate) and Poly (Ethylene Oxide). Materials Research Society, Spring 1995 Meeting, San Francisco, CA, April 19, 1995.
41. Ingari, J.V., Smith, D.K., and Yaszemski, M.J.: The Anatomic Significance of Magnetic Resonance Imaging Findings in Proximal Femur Fracture." 1995 Annual Meeting of the Society of Air Force Clinical Surgeons, Dayton, OH, April 25, 1995.
42. Delanois, R., Witkowski, E., Pape, H., Zimmer, W., and Yaszemski, M.J.: Mechanical Properties of Timetal, A Novel Alloy for Total Joint Applications. 1995 Annual Meeting of the Society of Air Force Clinical Surgeons, Dayton, OH, April 26, 1995.
43. Yaszemski, M.J.: Tissue Engineering Strategies to Regenerate Human Bone. 1995 Annual Meeting of the Society of Air Force Clinical Surgeons, Dayton, OH, April 26, 1995.
44. Ishaug, S.L., Yaszemski, M.J., Bizios, R., Aufdemorte, T.B., and Mikos, A.G.: Osteoblast Migration on Biodegradable Poly (α-Hydroxy Esters). American Society of Mechanical Engineers Summer Bioengineering Conference, Beaver Creek, CO, June 29, 1995.
45. Crane, G.M., Ishaug, S.L., Miller, M.J., Yasko, A.W., Aufdemorte, T.B., Yaszemski, M.J., and Mikos, A.G.: Bone Formation Using Porous Poly (Lactic-co-Glycolic Acid) Seeded with Stromal Osteoblast Cells. 1995 Annual Fall Meeting of the Biomedical Engineering Society, Boston, MA, October 6, 1995.

46. Jen, A., Yaszemski, M.J., and Mikos, A.G.: Three Dimensional *In Vitro* Polymer-Matrix/Cell Model for Bone Formation. American Institute of Chemical Engineers 1995 Annual Meeting, Miami, FL, November 12-17, 1995.
47. France, J., Yaszemski, M., Lauerman, W., Cain, J., Glover, M., Coe, J., Lawson, K., and Topper, S.: A Randomized, Prospective Study of Lumbar Fusion Outcome With and Without Pedicle Screw Instrumentation. Thirty-Seventh Annual Meeting of the Society of Military Orthopaedic Surgeons, Vail, CO, December 6, 1995.
48. Miller, M.J., Goldberg, D.P., Yasko, A.W., Lemon, J.C., Satterfield, W., Wake, M.C., Mikos, A..G., and Yaszemski, M.J.: Prefabricated Bone Flaps in Sheep. Thirty-Seventh Annual Meeting of the Society of Military Orthopaedic Surgeons, Vail, CO, December 6, 1995.
49. Jordan, T.F., Yaszemski, M.J., and Sanders, A.E.: Instrument Related Back Pain in Idiopathic Scoliosis. Thirty-Seventh Annual Meeting of the Society of Military Orthopaedic Surgeons, Vail, CO, December 6, 1995.
50. Delanois, R., Witkowski, E., Pape, H., Zimmer, W., and Yaszemski, M.J.: Mechanical Properties of Timetal, A Novel Alloy for Total Joint Applications. Thirty-Seventh Annual Meeting of the Society of Military Orthopaedic Surgeons, Vail, CO, December 6, 1995.
51. Miller, M.J., Goldberg, D.P., Yasko, A.W., Lemon, J.C., Satterfield, W., Wake, M.C., Mikos, A.G., and Yaszemski, M.J.: An In Vivo Model for Tissue Engineered Bone Flaps. 11th Annual Meeting of the American Society of Reconstructive Microsurgery, Tucson, AZ, January 14-17, 1996.
52. France, J., Yaszemski, M.J., Glover, J.M., Cain, J., Topper, S., Lauerman, W.: A Randomized Prospective Study of Lumbar Fusion With and Without Transpedicular Instrumentation. North American Spine Society Annual Meeting, Vancouver B.C., Canada, October 22, 1996.
53. Wong, C.L., Howard, R., Yaszemski, M.J., Howey, T.: Comparison of Suture Technique on Gap Formation in Tendon Attachment Utilizing a Suture Anchor. 38th Annual SOMOS Meeting, San Diego, CA, November 19-23, 1996.
54. Peter, S.J., Nolley, J.A., Engel, P.S., Alemany, L.B., Miller, M.J., Yaszemski, M.J., and Mikos, A.G.: Synthesis and characterization of a functionalized, unsaturated linear polyester. American Institute of Chemical Engineers Annual Meeting, Chicago, IL, November 15, 1996.
55. Suggs, L.J., Kao, E.Y., Yaszemski, M.J., and Mikos, A.G.: The characterization of a poly (propylene fumarate) and poly (ethylene glycol) block copolymer and evaluation of the crosslinked material for use as a vascular implant. American Institute of Chemical Engineers Annual Meeting, Chicago, IL, November 15, 1996.
57. Nolley, J.A., Peter, S.J., Yasko, A.W., Yaszemski, M.J., Mikos, A.G.: Degradation Study of a Poly(Propylene Fumarate) Based Biodegradable Bone Cement. Tissue Engineering Society Inaugural Meeting, Orlando, FL, December 13, 1996.
58. Wong, C.L., Howard, R., Yaszemski, M.J., Howey, T.: Comparison of Suture Technique on Gap Formation in Tendon Attachment Utilizing a Suture Anchor. American Association for Hand Surgery Annual Meeting, January 8-11, 1997, Boca Raton, Florida.
59. Ishaug-Riley, S.L., Crane, G.M., Gurlek, A., Miller, M.J., Yaszemski, M.J., Yasko, A.W., Mikos, A.G.: Ectopic Bone Formation by Marrow Stromal Osteoblast Transplantation Using Poly (DL-Lactic-Co-Glycolic Acid) Foams Implanted into the Rat Mesentery.

43rd Annual Meeting of the Orthopedic Research Society, San Francisco, CA, February 9-13, 1997, Poster.

60. Lauerman, W., France, J., Cain, J., Yaszemski, M.J., Glover, J.M.: A Randomized Prospective Study of Lumbar Fusion With and Without Transpedicular Instrumentation, Presented at the 64th Annual Meeting of the American Academy of Orthopaedic Surgerons, San Francisco, CA, February 13-17, 1997
61. Peter, S.J., Nolley, J.A., Kim, D.B., Widmer, M.S., Engel, P.S., Yasko, A.W., Yaszemski, M.J., Mikos, A.G.: Curing Characteristics and Mechanical Properties of a Poly(Propylene Fumarate) Based Orthopaedic Biomaterial. 43rd Annual Meeting of the Orthopedic Research Society, San Francisco, CA, February 16-19, 1997.
62. France, J., Yaszemski, M., Lauerman, W., Cain, J., Glover, J., Coe, J., Lawson, K., Topper, S.: A randomized prospective study of lumbar fusion with and without transpedicular instrumentation. American Academy of Orthopaedic Surgeons, Federation of Spine Associations, Specialty Day, San Francisco, CA, February 23, 1997.
63. Mikos, A.G., Riley, S.L., Thomson, R.C., Crane, G.M., Gurlek, A., Miller, M.J., Yasko, A.W., Yaszemski, M.J.: Polymeric Delivery Systems for Bone Cells. Annual Meeting of the Society for Biomaterials, New Orleans, LA, April 30, 1997.
64. Ishaug-Riley, S.L., Crane, G.M., Gurlek, A., Miller, M.J., Yaszemski, M.J., Yasko, A.W., Mikos, A.G.: Ectopic Bone Formation by Marrow Stromal Osteoblast Transplantation Using Poly (DL-Lactic-co-Glycolic Acid) Foams Implanted into the Rat Mesentery. Annual Meeting of the Society for Biomaterials, New Orleans, LA, April 30, 1997.
65. Suggs, L.J., Kao, E.Y., Krishnan, R.S., Patrick, C.W., Yaszemski, M.J., and Mikos, A.G.: Evaluation of a biodegradable block copolymer for use as a vascular implant. Annual Meeting of the Society for Biomaterials, New Orleans, LA, April 30, 1997.
66. Peter, S.J., Nolley, J.A., Kim, D.J., Widmer, M.S., Engel, P.S., Yasko, A.W., Yaszemski, M.J., Mikos, A.G.: Curing Characteristics and Mechanical Properties of a Poly(Propylene Fumarate) Based Orthopaedic Biomaterial. The American Society of Mechanical Engineers Bioartificial Tissue Symposium, 1997 Summer Bioengineering Conference, Sun River, OR, June 1997.
67. Peter, S.J., Miller, M.J., Yasko, A.W., Yaszemski, M.J., and Mikos, A.G.: Polymer concepts regarding tissue engineering. Portland Bone Symposium, Portland, OR, August 7, 1997.
68. Palmer, C., Murray, P., Snearly, W., Yaszemski, M.: The Mechanism of Ulnar-Sided Perilunar Instability of the Wrist. The 39th Annual Meeting of the Society of Military Orthopaedic Surgeons, Lake Placid, NY, October 8, 1997.
69. Thomson, R., Yaszemski, M.J., Powers, J., and Mikos, A.G.: Hydroxyapatite fiber reinforced poly(α-hydroxy ester) foams for bone regeneration. Orthopedic Biomaterials Session, Topical Conference on Biomaterials, Carriers for Drug Delivery, and Scaffolds for Tissue Engineering, 1997 Annual Meeting of the American Institute of Chemical Engineers, Los Angeles, CA, Nov. 19, 1997.
70. Peter, S.J., Yasko, A.W., Miller, M.J., Yaszemski, M.J., and Mikos, A.G.: TGF-β induced osteoblastic behavior on a poly(propylene fumarate) based orthopaedic biomaterial. Orthopedic Biomaterials Session, Topical Conference on Biomaterials, Carriers for Drug Delivery, and Scaffolds for Tissue Engineering, 1997 Annual Meeting of the American Institute of Chemical Engineers, Los Angeles, CA, Nov. 19, 1997.

71. Payne, R.G., Sivaram, S., Babensee, J., Yaszemski, M.J., Yasko, A.W., and Mikos, A.G.: Marrow stromal osteoblast encapsulation and seeding onto a crosslinking biodegradable polymer. Materials and Fabrication Methods for Tissue Engineering Scaffolds Session, Topical Conference on Biomaterials, Carriers for Drug Delivery, and Scaffolds for Tissue Engineering, 1997 Annual Meeting of the American Institute of Chemical Engineers, Los Angeles, CA, Nov. 17, 1997.
72. Yaszemski, M.J., Kim, D., Peter, S.J., Yasko, A.W., Miller, M.J., and Mikos, A.G.: TGF-β induced osteoblastic behavior on a poly(propylene fumarate) based orthopaedic biomaterial. Annual Meeting of the American Orthopaedic Association, Asheville, NC, June 3-5, 1998. (poster).
73. Palmer, C., Murray, P., Snearly, W., Yaszemski, M.: The Mechanism of Ulnar-Sided Perilunar Instability of the Wrist. Annual Meeting of the Society of Air Force Clinical Surgeons, San Antonio, TX, April 4, 1998.
74. Yaszemski, M.J.: Skeletal Tissue Engineering. 2nd Annual National Managed Health Care Council Meeting, Boston, MA, August 10, 1998.
75. Yaszemski, M.J.: Molecular, Cellular, and Tissue Strategies to Engineer Human Bone. Advances in Tissue Engineering, Rice University, Houston, TX, August 20, 1998.
76. Palmer, C., Murray, P., Snearly, W., Yaszemski, M.: The Mechanism of Ulnar-Sided Perilunar Instability of the Wrist. The American Society for Surgery of the Hand, Minneapolis, MN, September 15, 1998.
77. Payne, R.G., Sivaram, S.A., Babensee, J.E., Yasko, A.W., Yaszemski, M.J., and Mikos, A.G.: Temporary Encapsulation of Rat Marrow Osteoblasts in Gelatin Microspheres. Bi-Annual Meeting of the Tissue Engineering Society, Orlando, FL, December 4, 1998. (poster)
78. Palmer, C., Murray, P., Snearly, W., Yaszemski, M.: The Mechanism of Ulnar-Sided Perilunar Instability of the Wrist. The American Association for Surgery of the Hand, Waikoloa, HI, January 14, 1999.
79. Suggs, L.J., Yaszemski, M.J., and Mikos, A.G.: Development of Poly(propylene fumarate-co-ethylene glycol): An injectable, biodegradable implant for cardiovascular applications. 218th Annual Meeting of the American Chemical Society, Anaheim, CA, March 22, 1999.
80. Yaszemski, M.J.; Oldham, J.B., Porter, D.B., Hefferan, T.E., Currier, B.L., and Mikos, A.G.: Biologic Activity of rhBMP-2 Following Release From PLGA Microspheres. 218th Annual Meeting of the American Chemical Society, Special Session for the ACS Award in Polymer Chemistry honoring Robert Langer, Anaheim, CA, March 22, 1999.
81. Yaszemski, M.J. : Fiscal Initiatives at Academic Medical Centers in the Managed Care Environment. 46th Annual Meeting of the Society of Air Force Clinical Surgeons, San Antonio, TX, March 31, 1999.
82. He, S-L, Yaszemski, M.J., Yasko, A.W., and Mikos, A.G.: Development of a Biodegradable Bone Cement based on Poly (Propylene Fumarate) and Macromer. 1999 Annual Meeting of the Society for Biomaterials, Providence, RI, April 29, 1999.
83. Suggs, L.J.; Yaszemski, M.J.; and Mikos, A.G.: Development of poly(propylene fumarate-co-ethylene glycol): An injectable, biodegradable cardiovascular implant. 218th Annual Meeting of the American Chemical Society, Special Session for the ACS Award in Polymer Chemistry honoring Robert Langer, Anaheim, CA, March 22, 1999.

84. Porter, D.B., Oldham, J.B., Payne, R.G., An, K.N., Currier, B.L., Mikos, A.G., and Yaszemski, M.J.: Mechanical Properties of a Biodegradable Bone Regeneration Scaffold. 1999 Summer Bioengineering Conference of the American Institute of Chemical Engineers, American Society of Mechanical Engineers, American Society of Civil Engineers, and the Institute of Electrical and Electronic Engineers, Big Sky, MT, June 20, 1999.
85. Oldham, J.B., Porter, D.B., Hefferan, T.E., Currier, B.L., Mikos, A.G., and Yaszemski, M.J.: Biologic Activity of rhBMP-2 Following Release From PLGA Microspheres. 1999 Summer Bioengineering Conference of the American Institute of Chemical Engineers, American Society of Mechanical Engineers, American Society of Civil Engineers, and the Institute of Electrical and Electronic Engineers, Big Sky, MT, June 20, 1999.
86. Oldham, J.B., Porter, D.B., Tan, T.S., Brisby, H., Currier, B.L., Mikos, A.G., and Yaszemski, M.J.: Influence of Changes in Experimental Parameters on Size of PLGA Microspheres. 1999 Summer Bioengineering Conference of the American Institute of Chemical Engineers, American Society of Mechanical Engineers, American Society of Civil Engineers, and the Institute of Electrical and Electronic Engineers, Big Sky, MT, June 20, 1999.
87. Fuchs, B., Yaszemski, M.J., and Sim, F.H.: Extended Hemipelvectomy for Sarcomas of the Posterior Pelvis. Musculoskeletal Tumor Society Annual Meeting, May 13, 2000.
88. Zhu, X., Lu, L., Gill, J.S., Windebank, A.J., and Yaszemski, M.J.: Controlled Release of antisense oligonucleotides from biodegradable microparticles. 30th Annual meeting of the Society for Neuroscience, New Orleans, LA, November 5, 2000.
89. Christensen, D. M., Lynch, J., Currier, B.L., and Yaszemski, M.J.: C1 Anatomy and Dimensions Relative to Lateral Mass Screw Placement. 28th Annual Meeting of the Cervical Spine Research Society, Charleston, SC, November 30, 2000.
90. Zhu, X., Lu, L., Currier, B.L., Windebank, A.J., and Yaszemski, M.J.: Effects of PEG Contents on Controlled Release of Antisense ODNs from PLGA/PEG Microparticles. Society for Biomaterials 27th Annual Meeting, St. Paul, MN, April 26, 2001.
91. He, S-L., Ulrich, J., Valenzuela R.G., Zobitz, M., An, K-N., Currier, B.L., Mikos, A.G., and Yaszemski, M.J.: Mechanical evaluation of biodegradable polymer-bone fiber composites during the degradation process. Society for Biomaterials 27th Annual Meeting, St. Paul, MN, April 27, 2001.
92. Lu, L., Pederson, L.G., Zhu, X., Valenzuela, R.G., Currier, B.L., O'Driscoll, S.W., and Yaszemski, M.J.: Effects of Dynamic Fluid Pressure on Chondrocytes Cultured in Polymer Scaffolds. Society for Biomaterials 27th Annual Meeting, St. Paul, MN, April 28, 2001.
93. Kharas, G.B., Villaseñor, G., Herrman, J., Kharas, K., Watson, K., and Yaszemski, M.J.: Synthesis and Characterization of Fumarate Copolyesters for Biomedical Composites. Society for Biomaterials 27th Annual Meeting, St. Paul, MN, (poster), April 29, 2001.
94. Yaszemski, M.J.: "Musculoskeletal Tissue Engineering: Translation from the laboratory to the care of the patient." Scaffolding Materials for Bone Tissue Engineering Symposium, Society for Biomaterials 27th Annual Meeting, St. Paul, MN, April 29th, 2001.
95. Todd, L.T., Yaszemski, M.J., Currier, B.L., Fuchs, B.X., and Sim, F.H.: Bowel and Bladder Function following Sacral Resection. Annual Meeting of the Musculoskeletal Tumor Society, Baltimore, MD, May 11, 2001.

96. Yaszemski, M.J., Currier, B.L., Fuchs, B.X., and Sim, F.H.: En Bloc Spondylectomy for Sarcomas of the Mobile Spine. Annual Meeting of the Musculoskeletal Tumor Society, Baltimore, MD, May 11, 2001.
97. Zhu, X., Lu, L., Moore, M.J., Currier, B.L., Windebank, A.J., and Yaszemski, M.J.: Acidity of Release Medium Strongly Affects Poly(DL-Lactic-co-Glycolic Acid)/Poly(Ethylene Glycol) Microparticle Degradation and Oligonucleotide Release kinetics. 2001 Annual Symposium of the Controlled Release Society, San Diego, California, June 24, 2001.
98. Kharas, G.B., Villaseñor, G., Herrman, J., Mc Colough, K., Passe, L. B., Scola III, A., Watson, K., and Yaszemski, M. J.: Fumarate Based Polyester for Use in Bioresorbable Bone Cement Compositions, the 221st ACS National Meeting, Chicago, August 27-31, 2001 (poster).
99. Jimenez-Hamann, M.C., Attar, A., Midha, R., Tator, C., Yaszemski, M.J., and Shoichet, M.: In Situ Delivery of Therapeutic Agents for Treatment of Spinal Cord Injury. Society for Neuroscience 2001 Annual Meeting, San Diego, CA, November 14, 2001.
100. Todd, L.T., Currier, B.L., Maus, T., Fisher, D., and Yaszemski, M.J.: Anatomic Relationship of the Internal Carotid Artery to the Anterior Aspect of C1: A Potential Risk Factor for Screw Fixation of the Atlas. 29th Annual Meeting of the Cervical Spine Research Society, Monterey, CA, November 29- December 2, 2001
101. Christensen, D. M., Lynch, J., Currier, B.L., and Yaszemski, M.J.: C1 Anatomy and Dimensions Relative to Lateral Mass Screw Placement. 43rd Annual Meeting of the Society of Military Orthopaedic Surgeons (poster), Vail, CO, December 10-15, 2001.
102. Burdick, J.A., Poshusta, A.K., Yaszemski, M.J., and Anseth, K.S.: In vivo photopolymerization of degradable polyanhydride networks in a tibia defect. Annual Meeting of the Orthopaedic Research Society, Dallas, TX, February 10-13, 2002.
103. Ghaleb, A.H., Brower, M.C., Wong, G.Y., Huntoon, M.A., Ross, S.R., and Yaszemski, M.J.: Quadratus Femoris Muscle Injection for Chronic Left Hip/Buttock Pain. Midwest Anesthesia Resident's Conference, Omaha, NE, March 8-10, 2002.
104. Kempen, D.H.R., Lu, L., Zhu, X., Currier, B.L., and Yaszemski, M.J.: Fabrication and characterization of poly(propylene fumarate)/poly(lactic-co-glycolic acid) blend microspheres. Society for Biomaterials 28th Annual Meeting, Tampa, FL, April 24-27, 2002, (poster).
105. Aslam, M.A., Kim, C.W., Murikipudi, S., Chu, P., Currier, B.L., Lu, L., and Yaszemski, M.J.: Fabrication and characterization of porous, injectable poly(propylene fumarate)-based scaffolds via a foaming method. Society for Biomaterials 28th Annual Meeting, Tampa, FL, April 24-27, 2002, (poster).
106. Zhu, X., Lu, L., Liu. N., Chu, P., Currier, B.L., and Yaszemski, M.J.: Mechanical properties of biodegradable poly(propylene fumarate)/bone fiber composites. Society for Biomaterials 28th Annual Meeting, Tampa, FL, April 27, 2002.
107. Moore, M.J., Rowley, K.L., Ritman, E.L., Aslam, M.A., Chu, P., Currier, B.L., Lu, L., and Yaszemski, M.J.: Quantitative 3-D Microstructure Analysis of Biodegradable Porous Polymeric Scaffolds With X-ray Micro Computed Tomography. Society for Biomaterials 28th Annual Meeting, Tampa, FL, April 27, 2002.
108. Kempen, D.H.R., Lu, L., Zhu, X., Currier, B.L., and Yaszemski, M.J.: Controlled delivery of a model drug from poly(propylene fumarate)/poly(lactic-co-glycolic acid)

blend microspheres. Society for Biomaterials 28th Annual Meeting, Tampa, FL, April 27, 2002.

109. Friedman, J.A., Windebank, A.J., Lewellyn, E. B., Moore, M.J., and Yaszemski, M.J.: A Schwann cell-seeded, biodegradable polymer implant for promoting axon regeneration following spinal cord injury. 127th Annual Meeting of the American Neurological Association, New York, NY, October 13-16, 2002, (poster).
110. Ghaleb, A.H., Brower, M.C., Wong, G.Y., Huntoon, M.A., Ross, S.R., and Yaszemski, M.J.: Quadratus Femoris Muscle Injection for Chronic Left Hip/Buttock Pain. Annual Meeting of the American Society of Anesthesiologists, October, 2002.
111. Friedman, J.A., Moore, M.J., Yaszemski, M.J., Lewellyn, E.B., Spinner, R.J., Currier, B.L., and Windebank, A.J.: Biodegradable polymer implants to promote axonal regeneration following spinal cord injury. Annual Meeting of the Society for Neuroscience, Orlando, FL, November 3, 2002, (poster).
112. Currier, B.L., Maus, T.P., Larson, D.R., and Yaszemski, M.J.: Relationship of the Internal Carotid Artery to the Anterior Aspect of C1: Implications for C1-2 Transarticular and C1 Lateral Mass Screw Fixation. 30th Annual Meeting of the Cervical Spine Research Society, Miami, FL, December 5-7, 2002.
113. Moore, M.J., Friedman, J.A., Lewellyn, E.B., Windebank, A.J., Currier, B.L., and Yaszemski, M.J.: A Biodegradable Scaffold for Localized Cell Transplantation in the Injured Spinal Cord. Society for Biomaterials 29th Annual Meeting, Reno, NV, April 30-May 3, 2003, *accepted*.
114. Moore, M.J., Friedman, J.A., Windebank, A.J., Currier, B.L., and Yaszemski, M.J.: Release of Chondroitinase ABC from PLGA Microparticles. Society for Biomaterials 29th Annual Meeting, Reno, NV, April 30-May 3, 2003, *accepted*.
115. Argadine, H.M., Jabbari, E., Talac, R., Caro, W., Lu, L., Currier, B.L., and Yaszemski, M.J.: The Assessment of Interconnectivity of Tissue Engineering Scaffolds Using Hydraulic Permeability. Society for Biomaterials 29th Annual Meeting, Reno, NV, April 30-May 3, 2003, *accepted* (poster).
116. Friedman, J.A., Moore, M.J., Yaszemski, M.J., Lewellyn, E.B., Knight, A.M., Spinner, R.J., Currier, B.L., and Windebank, A.J.: A Biodegradable Polymer Implant Loaded with Schwann Cells for Surgical Repair of the Injured Spinal Cord: Device Engineering and Feasibility. Annual Meeting of the American Association of Neurological Surgeons, April 26 - May 1, 2003, *accepted* (poster).
117. Fuchs, B., Yaszemski, M.J., Inwards C., and Sim, F.H.: Operative Management of Sacrococcygeal Chordoma. Musculoskeletal Tumor Society Annual Meeting, May 1-3, 2003, *submitted*.
118. Friedmann, J.A., Lewellyn, E.B., Ameenuddin, S., Marin-Padilla, M., Gross, L., Small, A.J., Knight, A.M., Schermerhorn, T.C., Moore, M.J., Jabbari, E., Yaszemski, M.J., and Windebank, A.J.: Schwann cell seeded biodegradable polymer implants promote axonal regeneration in spinal cord. Peripheral Nerve Society, Banff, Canada, July 26-30, 2003, *submitted*.
119. Jabbari, E., Gruetzmacher, J.A., Lu, L., Currier, B.L., and Yaszemski, M.J.: Development of a novel, self-crosslinkable poly(caprolactone fumarate) as a biodegradable and injectable scaffold for bone tissue engineering. 25th Annual International Conference of the IEEE Engineering in Medicine and Biology Society. Cancun, Mexico, 17-21 September 2003, *submitted*.

PRESENTATIONS AT INTERNATIONAL MEETINGS

1. Yaszemski, M.J., and White III, A.A.: The Discectomy Membrane: Its Anatomic Description and Its Surgical Importance. Poster Presentation at the Ninth Combined Meeting of the Orthopaedic Associations of the English Speaking World, Toronto, Ontario, Canada, June 21-26, 1992
2. Ethier, D.B., Cain, J.E., Lauerman, W.C., Glover, M., and Yaszemski, M.J.: The Influence of Annulotomy Type on Disc Competence. International Society for the Study of the Lumbar Spine, 19th Annual Meeting, Marseilles, France, June 1993.
3. Ethier, D.B., Cain, J.E., Lauerman, W.C., Glover, M., and Yaszemski, M.J.: The Influence of Annulotomy Type on Disc Competence. Intradiscal Therapy Society, Aberdeen, Scotland, May 1994 (received Eugene J. Nordby Research Award as best presentation at meeting).
4. Mikos, A.G., Bizios, R., Ishaug, S.L., Thomson, R.C., Wake, M.C., and Yaszemski, M.J.: Polymer/Cell Constructs to Engineer Organs. 5th International ITV Conference on Biomaterials and Biohybrid Organs: Combination of Biomaterials and Cells to Functional Units. Denkendorf, Germany, June 8, 1994.
5. Mikos, A.G., Aufdemorte, T.B., Bizios, R., Ishaug, S.L., Payne, R.G., Thomson, R.C., and Yaszemski, M.J.: Osteoblast Culture on Biodegradable Polymer Scaffolds to Engineer Bone. 2nd World Congress of Biomechanics, Amsterdam, The Netherlands, July 13, 1994.
6. Pape, H.A., Zimmer, W.H., Delanois, R., Yaszemski, M.J., Witkowski, E.: Timetal®21SRx - Technology Transfer of Timetal®21S to Medical Device Applications. Eighth World Conference on Titanium, International Convention Centre, Birmingham, UK, October 22-26, 1995.
7. Jen, A., Ishaug, S.L., Yaszemski, M.J., McIntire, L.V., and Mikos, A.G.: Three Dimensional *In Vitro* Mechanical Model for Bone Formation. 1996 World Biomaterials Conference, Toronto, Ontario, Canada, June 1996.
8. Mikos, A.G., Riley, S.L., Crane, G.M., Miller, M.J., Yaszemski, M.J., and Yasko, A.W.: Cell Based Delivery Systems for Bone Growth Factors. 8th International Symposium on Recent Advances in Drug Delivery Systems, Salt Lake City, Utah, February 24-27, 1997.
9. France, J.C., Lauerman, W.C., Yaszemski, M.J., Cain, J.E., Glover, J.M., Coe, J., Lawson, K., and Topper, S.M.: A Randomized Prospective Study of Lumbar Fusion With and Without Transpedicular Instrumentation. 1997 Meeting of the International Society for the Study of the Lumbar Spine, Singapore, June 3, 1997.
10. Peter, S.J., Kim, D.J., Yasko, A.W., Miller, M.J., Yaszemski, M.J., and Mikos, A.G.: Poly(propylene fumarate)/β-tricalcium phosphate based biomaterials for engineering bone. European Tissue Repair Society, Freiburg, Germany, August 21, 1997.
11. Yaszemski, M.J.: Bone Tissue Engineering using Degradable Polymeric Biomaterials. Austria-Switzerland–Germany Exchange Fellowship Symposium, University of Wurzburg, Wurzburg, Germany, April 21, 1998.

12. Yaszemski, M.J.: History of Orthopaedic Surgery at the Mayo Clinic, Austria-Switzerland–Germany Exchange Fellowship Symposium, University of Tubingen, Tubingen, Germany, 27 April 1998.
13. Yaszemski, M.J., Blackman, R., Picetti, G., Luque, E.R., and Sanders, A.E.: Endoscopic Anterior Scoliosis Surgery and Instrumentation, Austria-Switzerland–Germany Exchange Fellowship Symposium, 1998 Annual Meeting of the Southern German Orthopaedic Society, Baden-Baden, Germany, April 30, 1998.
14. Yaszemski, M.J., Kim, D., Peter, S.J., Yasko, A.W., Miller, M.J., and Mikos, A.G.: TGF-β induced osteoblastic behavior on a poly(propylene fumarate) based orthopaedic biomaterial, , Austria-Switzerland–Germany Exchange Fellowship Symposium, Medical University of Hannover, Hannover, Germany, May 5, 1998.
15. Yaszemski, M.J.: Bone Tissue Engineering using Degradable Polymeric Biomaterials. Austria-Switzerland–Germany Exchange Fellowship Symposium, University of Ulm, Ulm, Germany, May 13, 1998.
16. Yaszemski, M.J.: Sacropelvic Resections for Musculoskeletal Sarcomas, Austria-Switzerland–Germany Exchange Fellowship Symposium, University of Vienna, Vienna, Austria, May 18, 1998.
17. Yaszemski, M.J.: Sacropelvic Resections for Musculoskeletal Sarcomas, Austria-Switzerland–Germany Exchange Fellowship Symposium, University of Graz, Graz, Austria, May 20, 1998.
18. Yaszemski, M.J., Blackman, R., Picetti, G., Luque, E.R., and Sanders, A.E.: Endoscopic Anterior Scoliosis Surgery and Instrumentation, Austria-Switzerland–Germany Exchange Fellowship Symposium, University of Innsbruck, Innsbruck, Austria, May 22, 1998.
19. Yaszemski, M.J.: History of Orthopaedic Surgery at the Mayo Clinic, Austria-Switzerland–Germany Exchange Fellowship Symposium, Kantonsspital St. Gallen, St. Gallen, Switzerland, May 26, 1998.
20. Yaszemski, M.J., Blackman, R., Picetti, G., Luque, E.R., and Sanders, A.E.: Endoscopic Anterior Scoliosis Surgery and Instrumentation, Austria-Switzerland–Germany Exchange Fellowship Symposium, Kantonsspital St. Gallen, St. Gallen, Switzerland, May 26, 1998.
21. Palmer, C., Murray, P., Snearly, W., Yaszemski, M.: The Mechanism of Ulnar-Sided Perilunar Instability of the Wrist. The Seventh Congress of the International Federation of Societies for Surgery of the Hand, Vancouver, Canada, May 17, 1998.
22. Yaszemski, M.J., Oldham, J.B., Porter, B.D., Hefferan, T.E., Larson, D.R., Currier, B.L., and Mikos, A.G.: Biologische Aktivität von rhBMP-2 nach Freisetzung aus PLGA Mikrosphären. (Biologic Activity of rhBMP-2 after release from PLGA microspheres). Presented in German at the Austria-Switzerland-Germany Fellows Meeting in conjunction with the Annual Meeting of the Swiss Orthopaedic Society, Winterthur, Switzerland, September 9, 1999.
23. Yaszemski, M.J.: Evaluation and Management of Metastatic Disease of the Spine. Austria-Switzerland-Germany Fellows Session at the 2000 Annual Meeting of the Southern German Orthopaedic Society, Baden-Baden, Germany, April 29, 2000.
24. He, S.L., Yaszemski, M.J., Yasko, A.W., Engel, P.S., and Mikos, A.G.: Synthesis of Biodegradable Poly(Propylene Fumarate) Networks with Poly(Propylene Fumarate)-Diacrylate Macromers as Crosslinking Agents and Characterization of their Degradation Products. World Biomaterials Congress, Kameula, HI, May 19, 2000.

25. Lu, L., Peter, S.J., Stamatas, G.N., Kim, D.J., Miller, M.J., Yaszemski, M.J., and Mikos, A.G.: Controlled Release of TGF-β1 from biodegradable polymer microparticles and its effects on marrow stromal osteoblast function. International Conference on Bone Morphogenetic Proteins, Lake Tahoe, CA, June 10, 2000.
26. Lynch, J.J., Christensen, D.M., Yaszemski, M.J., Marsh, R. and Currier, B.L.: C1 Anatomy and Dimensions Relative to Lateral Mass Screw Placement, 16th Annual Meeting of the European Cervical Spine Research Society, London, England, June 21-24, 2000.
27. Velan, G.J., Currier, B.L., and Yaszemski, M.J.: Hemorrhagic spinal juxta-facet cysts: Clinical features and outcome of surgical treatment. Annual Meeting of The Israeli Orthopedic Association, Tel Aviv, Israel, December 4-5, 2000.
28. Velan, G.J., Currier, B.L., and Yaszemski, M.J.: Traumatic spondylolisthesis of the lower cervical spine. Annual Meeting of The Israeli Orthopedic Association, Tel Aviv, Israel, December 4-5, 2000.
29. Sim, F.H., and Yaszemski, M.J.: Ventral and Dorsal Sacral Resection (Cadaver Demonstration). 1st International Symposium and Workshop: Reconstructive Surgery of the Pelvis, University of Graz and Mayo Foundation, Graz, Austria, April 20, 2001.
30. Yaszemski, M.J.: Fraturas da coluna toraco lombar (Thoracolumbar fractures). Congresso do instituto de ortopedia e traumatologia (CIOT), University of Sao Paolo, Sao Paolo, Brazil, May 18, 2001.
31. Yaszemski, M.J.: Engenharia do tecido osseo (Bone Tissue Engineering). Congresso do instituto de ortopedia e traumatologia (CIOT), University of Sao Paolo, Sao Paolo, Brazil, May 19, 2001.
32. Yaszemski, M.J.: Tratamento das metastases na coluna vertebral (Treatment of spinal metastases). Congresso do instituto de ortopedia e traumatologia (CIOT), University of Sao Paolo, Sao Paolo, Brazil, May 19, 2001.
33. Currier, B.L., Maus, T.P., Larson, D.R., and Yaszemski, M.J.: Relationship of the Internal Carotid Artery to the Anterior Aspect of C1: Implications for C1-2 Transarticular and C1 Lateral Mass Screw Fixation. Austrian-Swiss-German Fellows Session of the Annual Meeting of the Southern German Orthopaedic Society, Baden-Baden, Germany, May 4, 2002.
34. Currier, B.L., Maus, T.P., Larson, D.R., and Yaszemski, M.J.: Relationship of the Internal Carotid Artery to the Anterior Aspect of C1: Implications for C1-2 Transarticular and C1 Lateral Mass Screw Fixation. 2002 Meeting of the European Cervical Spine Research Society, Paris, France, June 13-14, 2002 (poster).
35. Kharas, G.B., Villaseñor, G., Herrman, J., Kharas, K., Watson, K., and Yaszemski, M.J.: Synthesis and Characterization of Fumarate Copolyesters for use in Bioresorbable Bone Cement Composites. Materials Congress, London, UK, April 9-11, 2002.
36. Kempen, D.H.R., Kin, C.W., Lu, L., Dhert, W.J.A., Currier, B.L., and Yaszemski, M.J.: Controlled release from poly(lactic-co-glycolic acid) microspheres embedded in an injectable, biodegradable scaffold for bone tissue engineering. Thermec Conference, Madrid, Spain, 2003, *submitted*.

INVITED LECTURES

1. Yaszemski, M.J.: "The Anatomy and Function of the Intrinsic and Extrinsic Motors of the Fingers." Orthopaedic Grand Rounds, Beth Israel Hospital, Harvard Medical School, Boston, MA, February 21, 1990.
2. Yaszemski, M.J.: "Novel Polymeric Biomaterials for Use in Orthopaedic Surgery." Institute of Biosciences and Bioengineering, Department of Chemical Engineering, Rice University, Houston, Texas, October 9, 1992.
3. Yaszemski, M.J.: "Novel Polymeric Biomaterials for use in Orthopaedic Surgery." 11th Annual Symposium of the Houston Bioengineering Society, University of Houston, Houston, TX, February 11, 1993.
4. Yaszemski, M.J.: "A Temporary Replacement for Trabecular Bone: The Design, Synthesis, and Mechanical Testing of a Novel Degradable Polymeric Biomaterial." Orthopaedic Grand Rounds, Methodist Hospital, Baylor College of Medicine, Houston, TX, February 12, 1993.
5. Yaszemski, M.J.: "Clinical Orthopaedic Biomechanics and Biomaterials." Biomechanics Symposium funded by Orthopaedic Research and Education Foundation, Dwight D. Eisenhower Army Medical Center and Medical College of Georgia, Augusta, GA, May 14-15, 1993.
6. Yaszemski, M.J.: "Experimental Design and Statistical Analysis of Experiments." Biomechanics Symposium funded by Orthopaedic Research and Education Foundation, Dwight D. Eisenhower Army Medical Center and Medical College of Georgia, Augusta, GA, May 14-15, 1993.
7. Yaszemski, M.J.: "Bone Reconstruction and Regeneration." Lecture given at the first "Advances in Tissue Engineering" course, Institute of Biosciences and Bioengineering, Department of Chemical Engineering, Rice University, Houston, TX, August 5, 1993.
8. Yaszemski, M.J.: "Clinical Considerations in Surgical Decisions Regarding Selection of Materials for Total Joint Replacement." C. William Hall Seminar Series of the Center for the Enhancement of the Biology-Biomaterials Interface, University of Texas Health Science Center at San Antonio, San Antonio, TX, December 10, 1993.
9. Yaszemski, M.J.: "Bone Regeneration." Combined Clinical-Research Seminar Series, Department of Orthopaedic Surgery, Beth Israel Hospital/Harvard Medical School, Boston, MA, April 4, 1994.
10. Yaszemski, M.J.: "The Design, Synthesis, Characterization, and Mechanical Testing of a Novel Degradable Polymeric Biomaterial for Orthopaedic Applications." Department of Chemical Engineering Seminar, Massachusetts Institute of Technology, Cambridge, MA, April 4, 1994.
11. Yaszemski, M.J.: "Bone Regeneration and Reconstruction." First Annual Texas Total Joint Roundup Hip and Knee Arthroplasty Course, San Antonio, TX, April 9, 1994.
12. Yaszemski, M.J.: "Bone Repair, Regeneration, and Reconstruction." Lecture given at the 2nd annual Advances in Tissue Engineering Course, Institute of Biosciences and Bioengineering, Department of Chemical Engineering, Rice University, Houston, TX, August 4, 1994.
13. Yaszemski, M.J., and Mikos, A.G.: "Degradable Polymers with Osteoblast Transplantation as Strategies for Bone Tissue Engineering." Fifth Engineering Foundation Conference on Cell Culture Engineering, San Diego, CA, January 30, 1996.

14. Yaszemski, M.J.: "Wound Healing." Annual Meeting of the Undersea Hyperbaric Medical Society, Gulf Coast Chapter, San Antonio, TX, March 24, 1996.
15. Yaszemski, M.J.: "Bone Regeneration using Degradable Polymers." Annual Meeting of the Society of Air Force Clinical Surgeons, San Antonio, TX, April 4, 1996.
16. Yaszemski, M.J.: "Bone Regeneration." Lecture given at the 4th annual Advances in Tissue Engineering course, Institute of Biosciences and Bioengineering, Department of Chemical Engineering, Rice University, Houston, TX, August 9, 1996.
17. Yaszemski, M.J.: "Tissue Engineering in Orthopedic Surgery." Biomedical Engineering Seminar Series, University of Minnesota, Minneapolis, MN, November 12, 1996.
18. Yaszemski, M.J.: "Skeletal Tissue Engineering." FDA Advisory Panel on Orthopaedic Devices, Gaithersburg, MD, March 7, 1997.
19. Yaszemski, M.J.: "Tissue Engineering Strategies for Orthopaedic Applications." FDA Staff College, Center for Devices and Radiologic Health, Rockville, MD, April 8, 1997.
20. Yaszemski, M.J.: "The Evaluation and Treatment of Lumbar Radiculopathy." AAPA's 25th Annual Physician Assistant Conference, Minneapolis, MN, May 24-29, 1997.
21. Yaszemski, M.J.: "Molecular, Cellular and Tissue Strategies to Engineer Human Bone." 5th annual Advances in Tissue Engineering Course, Institute of Biosciences and Bioengineering, Department of Chemical Engineering, Rice University, Houston, TX, August 14, 1997.
22. Yaszemski, M.J.: "Molecular, Cellular and Tissue Strategies to Engineer Human Bone." 6th annual Advances in Tissue Engineering Course, Institute of Biosciences and Bioengineering, Department of Chemical Engineering, Rice University, Houston, TX, August 20, 1998.
23. Yaszemski, M.J.: "Clinical Applications of Orthopaedic Tissue Repair Technologies". Royal Society of Medicine, London, England, November 23, 1998.
24. Yaszemski, M.J.: "Bone Tissue Engineering." 7th Annual Advances in Tissue Engineering Course, Institute of Biosciences and Bioengineering, Department of Chemical Engineering, Rice University, Houston, TX, August 26, 1999.
25. Yaszemski, M.J.: "Mechanical Properties of Shape Specific Scaffolds for Bone Tissue Engineering." Ecole Polytechnique Federale Lausanne (Swiss Federal Institute of Technology), Lausanne, Switzerland, September 8, 1999.
26. Yaszemski, M.J.: "Evaluation and Management of Metastatic Disease of the Spine." Annual Meeting of the Society of Military Orthopaedic Surgeons, Williamsburg, VA, October 27, 1999.
27. Yaszemski, M.J.: Clinical Needs for Bone Tissue Engineering Technology. Bone Engineering Workshop, University of Toronto, Toronto, Ontario, Canada, December, 1999.
28. Yaszemski, M.J.: "Clinical Needs for Bone Tissue Engineering." 8th Annual Advances in Tissue Engineering Course, Institute of Biosciences and Bioengineering, Department of Chemical Engineering, Rice University, Houston, TX, August 14, 2000.
29. Yaszemski, M.J., and Lu, L.: "Synthetic Biodegradable Polymer Scaffolds for Cartilage Tissue Engineering." Association of Bone and Joint Surgeons' "Articular Cartilage Repair 2000" workshop, Tampa, Fl, November 11, 2000.
30. Yaszemski, M.J., and Lu, L.: "Bone Tissue Engineering: the Clinical Perspective." The Art of Tissue Engineering Congress 2000, University Medical Center Utrecht and Twente University, Utrecht, Netherlands, November 17, 2000.

31. Yaszemski, M.J.: Musculoskeletal Tissue Engineering. Materials Research Society Annual Meeting, Boston, MA, November 28, 2000.
32. Yaszemski, M.J.: "Musculoskeletal Tissue Engineering: Translation from the laboratory to the care of the patient." Invited lead presentation, Special Symposium on Scaffolding Materials for Bone Tissue Engineering, Society for Biomaterials 27th Annual Meeting, St. Paul, MN, April 29th, 2001.
33. Yaszemski, M.J.: Fraturas da coluna toraco lombar (Thoracolumbar fractures). Congresso do instituto de ortopedia e traumatologia (CIOT), University of Sao Paolo, Sao Paolo, Brazil, May 18, 2001.
34. Yaszemski, M.J.: Engenharia do tecido osseo (Bone Tissue Engineering). Congresso do instituto de ortopedia e traumatologia (CIOT), University of Sao Paolo, Sao Paolo, Brazil, May 19, 2001.
35. Yaszemski, M.J.: Tratamento das metastases na coluna vertebral (Treatment of spinal metastases). Congresso do instituto de ortopedia e traumatologia (CIOT), University of Sao Paolo, Sao Paolo, Brazil, May 19, 2001.
36. Yaszemski, M.J., and Lu, L.: Animal Models for Musculoskeletal Tissue Engineering Applications. 9th Annual Advances in Tissue Engineering Course, Institute of Biosciences and Bioengineering, Department of Chemical Engineering, Rice University, Houston, TX, August 19, 2001.
37. Yaszemski, M.J.: Clinical and Regulatory Considerations in Bone Tissue Engineering. Third Annual Techvest Conference, New York, N.Y., October 23, 2001.
38. Yaszemski, M.J.: Flatback Syndrome: Evaluation, Indications, Techniques and Complications. Advanced Techniques and Current Concepts in Spine Surgery #3382, Currier, B.L., and Rechtine II, G.R., Course Chairmen; Orthopaedic Learning Center, Rosemont, IL, November 18, 2001.
39. Yaszemski, M.J., Pedicle Subtraction Osteotomy. Lecture and Cadaver Video Demonstration. Advanced Techniques and Current Concepts in Spine Surgery #3382, Currier, B.L., and Rechtine II, G.R., Course Chairmen; Orthopaedic Learning Center, Rosemont, IL, November 18, 2001.
40. Yaszemski, M.J.: The Evaluation and Management of Thoracolumbar Spine Trauma. 43rd Annual Meeting of the Society of Military Orthopaedic Surgeons, Vail, CO, December 11, 2001.
41. Yaszemski, M.J.: The Evaluation and Management of Metastatic Disease of the Spine. Instructional Course Lecture, American Academy of Orthopaedic Surgeons Annual Meeting, Dallas, TX, Feb. 14, 2002.
42. Yaszemski, M.J., and Talac, R.: The Biocompatibility of Polymeric Biomaterials. Invited lead presentation, Special Symposium on Implant Pathology of Plastics, Society for Biomaterials 28th annual Meeting, Tampa, FL, April 27th, 2002.
43. Yaszemski, M.J., Lu, L., and Talac, R.: Animal Models for Evaluation of Tissue Engineed Devices. 10th Annual Advances in Tissue Engineering Course, Institute of Biosciences and Bioengineering, Department of Chemical Engineering, Rice University, Houston, TX, August 14, 2002.
44. Yaszemski, M.J.: The FDA Advisory Panel Process. SICOT/SIROT Panel Session "The American FDA and the Orthopaedic Surgeon: Regulation of Orthopaedic Devices", San Diego, CA, August 29, 2002.

45. Yaszemski, M.J. and Mikos, A.G.: Injectable Polymers and Hydrogels for Orthopaedic and Dental applications. American Academy of Orthopaedic Surgeons/National Institutes of Health "Tissue Engineering in Musculoskeletal Clinical PracticeWorkshop", Santa Fe, New Mexico, January 16-19, 2003.
46. Yaszemski, M.J. and Currier, B.L.: The Evaluation and Management of Metastatic Disease of the Spine. Instructional Course (#305) Lecture, American Academy of Orthopaedic Surgeons Annual Meeting, New Orleans, LA, February 7, 2002.
47. Yaszemski, M.J.: Evaluation and Management of Primary and Metastatic Tumors of the Spine and Sacrum. Department of Surgery Grand Rounds, Memorial Sloan-Kettering Cancer Center, New York, N.Y., March 3, 2003.

INVITED VISITING PROFESSORSHIPS

Department of Orthopaedic Surgery, University of Rochester, Rochester, NY, March 19-20, 1999.
Department of Orthopaedic Surgery, Wilford Hall Medical Center, Lackland Air Force Base, San Antonio, TX, June 21-22, 2002.
Department of Orthopaedic surgery, Washington University, Saint Louis, MO, March 26, 2003.

GRANTS RECEIVED:

1. Yaszemski, M.J. (PI), and Hayes, W.C. (co-PI): "A Temporary Replacement for Trabecular Bone: The Design, Synthesis, and Characterization of a Bioerodible Polymeric Biomaterial." July 1, 1991 - June 30, 1992.
2. Yaszemski, M.J. (PI), ---, (co-PI), ---, and ---: "Novel Polymeric Degradable Biomaterials and Osteoblast Transplantation for Repair and Temporary Replacement of Bone." July 1, 1993 - June 30, 1995.
3. --- (PI), Yaszemski, M.J. (co-PI), and ---: "A Radiographic and Anatomic Correlation of the C1-C2 relationships in a Ligamentously Intact Cadaver Spine Model." December 1992 - December 1994.
4. Yaszemski, M.J. (PI): "Novel Biodegradable Composite Biomaterials for Orthopaedic Applications." United States Air Force Surgeon General's Office Grant #SGO 93-070: $190,985, June 3, 1994 - June 13, 1996.
5. Benedetti, G., Parsons, T.W., and Yaszemski, M.J.: "Direct Electrical Stimulation of Canine Bone Allograft." United States Air Force Surgeon General's Office Grant: $11,985, February 1994 - June 1997
6. Yaszemski, M.J., ---, ---, and ---: "Determination of the Material Properties of Timetal 21SRx, an Alloy with Potential Orthopaedic Applications." January 1994 - July 1996.
7. Mikos, A.G. (P.I.), Yasko, A.W., and Yaszemski, M.J. (co-investigators): "Bone Regeneration by Osteoblast Transplantation." $504,070, NIH R-29, April 1, 1996-March 31, 2001.
8. Mikos, A.G. (P.I.), Yaszemski, M.J. (co-investigator): "Injectable Biomaterials for Bone Tissue Engineering." $729,637, NIH R-01, December 1, 1996-November 30, 2000

9. Yaszemski, M.J. (P.I.): "The Synthesis, Characterization, and Drug Delivery Kinetics of a Degradable Polymeric Composite Biomaterial for Orthopaedic Applications." Grant, January 1, 1998- December 31, 1999.
10. Yaszemski, M.J.: BMP-2 Controlled Release from Degradable Polymeric Microspheres for Bone Regeneration. July 1, 1998- June 30, 2001.
11. Mikos, A.G. (P.I.), Yaszemski, M.J., Miller, M., Yasko, A.W., Peter, S.J., Aufdemorte, T.B., Engel, P., and Zygourakis, K. (co-investigators): "In Situ Polymerizable Gels for Dental Tissue Engineering." NIH R01 DE13031-01 (NIDR), September 1, 1998- August 31, 2003.
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13. Yaszemski, M.J. (P.I.), Mikos, A.G., and Currier, B.L. (co-investigators): "Osteoinductive Injectable Degradable Polymeric Scaffold." $938,750, NIH 1 R01 AR 45871-01 (NIAMS), September 1, 1999-August 31, 2004.
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15. Shoichet, M.S. (P.I.), Tator, C.H., and Yaszemski, M.J., "Enhancing axonal regeneration following spinal cord injury by in situ delivery of neuroregenerative factors", Jan. 1, 2001 – March 31, 2004.
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CONSULTING:

Cambridge Scientific, Inc., Belmont, MA; Donald L. Wise, Ph.D., President.
NIH SBIR Phase I Grant #PCS-158: Development of a Bioabsorbable Bone Grout
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14. Pharmaceutical Science and Technology, 2002-
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